<div align="center">**Amendments to the Claims**</div>

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 -15 (Cancelled).

16. (New) An information handling system, comprising:

an instruction of fixed length comprising a first field for specifying a plurality of other fields, the first field being used to address registers into a register file, the register file comprising a size larger than the first field can address;

an indirection table comprising a plurality of entries, which are indexed by said first field in the instruction, each entry storing a plurality of register identifiers; and

a decoder for decoding the instruction that uses the indirection table to address a register file.

17. (New) The system of claim 16, further comprising a compiler that generates compiler instructions that use the indirection table to perform a conversion, the conversion comprising:

allocating an indirection table entry;

storing the register values in said indirection table entry; and

generating a new instruction that uses said indirection table entry.

18. (New) The system of claim 17, wherein the compiler generates three-address instructions for a large virtual register file, the system further comprising a code generation pass that converts said three-address instructions into instructions using the indirection table.

19. (New) The system of claim 16, further comprising a binary rewriting tool that converts three-address instructions into instructions that use the indirection table.

<div align="center">4</div>

20.   (New) The system of claim 16, wherein the decoder further comprises logic for:

extracting from the instruction said field identifying the register fields;

using said field to index into the indirection table; and

expanding the instruction using said entry from the indirection table

address the register file using the expanded instruction.

21.   (New) The system of claim 16, further comprising a compatibility mode, in which instructions can directly access the register file, without going through the indirection table

22.   (New) A method comprising:

using an instruction of fixed length for specifying a plurality of fields, a first field being used to address registers into a register file, of a size larger than the first field can address;

using an indirection table, comprising a plurality of entries,

indexing each entry by said first field in the instruction;

storing a plurality of register identifiers in each entry; and

decoding the instruction that uses the indirection table to address a register file.

23.   (New) The method of claim 22 further comprising steps of:

allocating an indirection table entry;

storing the register values in said indirection table entry; and

generating a new instruction that uses said indirection table entry.

24.   (New) The method of claim 22 further comprising a step of converting said instruction into the new instruction using the indirection table.

25.   (New) The method of claim 22 further comprising a step of converting a three-address instruction into the instruction that uses the indirection table.

26.   (New) A computer readable medium comprising computer code for causing a processor to:

use an instruction of fixed length for specifying a plurality of fields, a first field being used to address registers into a register file, of a size larger than the first field can address;

use an indirection table, comprising a plurality of entries,

index each entry by said first field in the instruction;

store a plurality of register identifiers in each entry; and

decode the instruction that uses the indirection table to address a register file.

27.   (New) The computer readable medium of claim 26 further comprising computer code for causing a processor to:

allocate an indirection table entry;

store the register values in said indirection table entry; and

generate a new instruction that uses said indirection table entry.

28.   (New) The computer readable medium of claim 26 further comprising computer code for causing a processor to convert the instruction into the new instruction using the indirection table.

29.   (New) The computer readable medium of claim 26 further comprising computer code for causing a processor to convert a three-address instruction into an instruction that uses the indirection table.